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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,990	01/16/2004	Soo Young Oh	0630-1930P	5006

2292 7590 01/17/2007
BIRCH STEWART KOLASCH & BIRCH
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FALLS CHURCH, VA 22040-0747

EXAMINER	
PATEL, RITA RAMESH	
ART UNIT	PAPER NUMBER
1746	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/17/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/757,990	OH ET AL.	
	Examiner	Art Unit	
	Rita R. Patel	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/8/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgement has been made of applicant's claim for priority under 35 U.S.C. 119. This application claims the priority of Korean application 10-2003-0056224 filed 8/13/03.

Drawings

The drawings received 1/16/04 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 recites the limitation "the spray nozzle" in line 2 of said claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, claim 4 will be presumed to be a dependent of claim 3.

Claim Rejections 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. herein referred to as "Matsumoto" (Patent No. JP02000176192A), further in view of Bassill et al. herein referred to as "Bassill" (Pub. No. US 2002/0117497A1)

Matsumoto teaches a washing machine with a steam generator including an inner and outer drum. Matsumoto teaches the claimed invention except fails to disclose a high frequency induction heating mechanism.

Bassill teaches an induction heating and control system. Bassill further discloses that current washing machines use hot water supplied from the household hot water supply which is limited to the supply temperature of the home's water heater, or the washing machine uses an internal water heating system based on resistive type heating elements. The resistive heating elements are slow to heat up and become covered with scale, thus reducing their efficiency. Over time, the heating chamber becomes clogged and ineffective. Induction heated water for the washing cycle overcomes these and many other challenges and produces a better wash because of the high wash temperatures (Paragraph [0193]). Bassill recites a tub component of said washing machine (Paragraph [0191]) and thus one of ordinary skill in the art at the time of the

invention would have at once envisaged a drum in said an washing machine for use with an induction heating apparatus.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the induction heating apparatus of Bassill in use with a washing machine, as taught by Matsumoto, to achieve steam cleaning of fabrics being washed. Steam cleaning in washing machines is commonly known in the art, as taught by Matsumoto for achieving inexpensive and high temperature cleaning that is gentle on articles being cleansed.

Bassill's design utilizes a ferrous container which is heated by the application of a magnetic field applied to the outer shell of the container. A coil may be designed heating one side of the container to produce steam (Paragraph [00187]); thus reading on applicant's claim for a steam generating apparatus.

Utilizing a hot water booster heater which is heated by induction, the washing machine can be made much more energy efficient and will provide a superior wash with the super heated hot water. The input water to the washing machine could be cold or hot water. The booster heater will hat the water to the desired temperature and then feed it (discharge pipe) to the washing tub. Rapid heat up of the water with high efficiency induction heating will save energy and the extra hot water will provide a better wash. The water heater section would be placed inline with the supply water (water supply pipe) (Paragraph [0191]). The booster heater would be fabricated from a ferrous metal and a coil would be formed to surround the chamber. Application of a magnetic field to the water chamber will generate heat in the chamber and heat the water; this

reads on applicant's claim for a coil and high-frequency magnetic field. Finally, Bassill teaches a fan 34, shown in Figure 2, which reads on applicant's claim for a fan installed at one side of the steam supply line.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bassill and Matsumoto as applied to claim 2 above, further in view of VonPless (US Patent No. 5,461,887).

Bassill teaches the claimed invention except fails to specify a spray nozzle for supplying the steam generated. VonPless teaches a fabric cleaning machine wherein steam from steaming plate 56 is disseminated via spray nozzles 66. It is commonly known in the art of fabric article cleaning to spray a steam by means of a spray nozzles because it allows for more concentrated, higher velocity flow towards the items being cleansed. Directing steam in such machines is also important to eliminate errant steam propagation all over the internal mechanical parts of the machine, which may cause unduly erosion and machinery failure. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a spray nozzles to discharge the steam created into the washing drum of a household washing machine in Bassill, as shown by VonPless to be a commonly known attachment accessory in the art for achieving said beneficial results.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rita R. Patel

MICHAEL BARR
SUPERVISORY PATENT EXAMINER